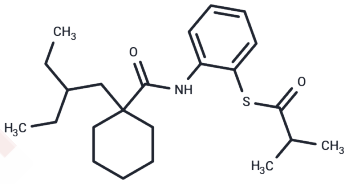
Data Sheet (Cat.No.T6048)

TargetMol

Dalcetrapib

Chemical Properties



CAS No. : 211513-37-0

Formula: C23H35NO2S

Molecular Weight: 389.59

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Dalcetrapib (RO4607381), a rhCETP inhibitor (IC50=0.2 μM), increases the plasma HDL cholesterol.
Targets(IC50)	CETP
In vitro	Dalcetrapib modulates CETP activity. Dalcetrapib induces a conformational change in CETP, when added to human plasma. CETP-induced pre-β-HDL formation in human plasma is unchanged by Dalcetrapib ≤3 μM and increased at 10 μM. Dalcetrapib statistically and significantly increases pre-β-HDL formation. [1] Dalcetrapib achieves 50% inhibition of CETP activity in human plasma at a concentration of 9 μM. [2] Dalcetrapib inhibits the CETP activity of media in HepG2 in a dose-dependent manner. [3]
In vivo	Treatment with Dalcetrapib leads to significant increases in HDL-C levels. In hamsters injected with [3H]cholesterol-labeled autologous macrophages Dalcetrapib significantly increases fecal elimination of both [3H]neutral sterols and [3H]bile acids. Dalcetrapib increases plasma HDL-[3H]cholesterol. [1] Dalcetrapib has 95% inhibition of CETP activity in male Japanese white rabbits at an oral dose of 30 mg/kg. Dalcetrapib increases the plasma HDL cholesterol level by 27% and 54%, respectively, when given at oral doses of 30 mg/kg or 100 mg/kg once a day for 3 days to male Japanese white rabbits. [2] Treatment with Dalcetrapib markedly increases serum levels of HDL-C. The ratio of HDL2-C to HDL3-C is significantly higher in Dalcetrapib-treated rabbits than in control rabbits at 5 and 7 months, indicating that the inhibition of CETP activity by Dalcetrapib changes the distribution of HDL subfractions and preferentially increases HDL2-C levels. Dalcetrapib treatment increases serum paraoxonase activity and HDL-associated platelet-activating factor acetylhydrolase activity, but decreases the plasma lysophosphatidylcholine concentration. [4]
Kinase Assay	Inhibition of rhCETP and C13S CETP-mediated transfer of CE from HDL to LDL: The inhibitory potency (IC50) of Dalcetrapib to decrease CE transfer from HDL to LDL by rhCETP and C13S CETP is measured using a scintillation proximity assay kit. Briefly, [3H] CE-labeled HDL donor particles are incubated in the presence of purified CETP proteins (final concentration 0.5 μg/mL) and biotinylated LDL acceptor particles for 3 hours at 37 °C. Subsequently, streptavidin-coupled polyvinyltoluene beads containing liquid scintillation cocktail binding selectively to biotinylated LDL are added, and the amount of [3H]CE molecules transferred to LDL is measured by β counting.

Cell Research	The HepG2 cells are seeded in 6-well plates and cultured to 70-80% confluence. After being washed with PBS, the cells are incubated with growth medium and a different concentration (0 μM-30 μM) of chemical inhibitor Dalcetrapib and dissolved in 2% DMSO for 24 hours. Total RNA is used for RT-PCR.(Only for Reference)

Solubility Information

Solubility	DMSO: 72 mg/mL (184.81 mM),Sonication is recommended. Ethanol: 72 mg/mL (184.81 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.13 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5668 mL	12.834 mL	25.668 mL
5 mM	0.5134 mL	2.5668 mL	5.1336 mL
10 mM	0.2567 mL	1.2834 mL	2.5668 mL
50 mM	0.0513 mL	0.2567 mL	0.5134 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Niesor EJ, et al. J Lipid Res. 2010, 51(12), 3443-3454.
Shinkai H, et al. J Med Chem. 2000, 43(19), 3566-3572.
Huang Z, et al. Am J Physiol Endocrinol Metab. 2003, 284(6), E1210-E1219.
Zhang B, et al. Arterioscler Thromb Vasc Biol. 2004, 24(10), 1910-1915.
Derks M, et al. Br J Clin Pharmacol. 2010, 70(6), 825-833.